

CHAPTER XII

SUMMARY OF FINDINGS

Major findings for this report include the following:

- Demands for water in the Central Valley and elsewhere in the State of California (State) exceed available supplies. This condition is expected to become more pronounced in the future with one likely result that more agricultural supplies will be transferred to urban uses.
- A need exists to improve water supply reliability for San Francisco Bay Area (Bay Area) water users primarily during drought periods.
- A need also exists to promote the continued and successful implementation of actions such as pumping curtailments at Central Valley Project (CVP) and State Water Project (SWP) facilities to protect at-risk fish in the Sacramento-San Joaquin Delta (Delta). At the same time, it is important to carry out these protective actions without significantly impacting water users who are dependent on the Delta for their water supplies.
- It is expected that the EWA or a similar program will continue in the future, acquiring water supplies for fisheries actions primarily through water market purchases and short term transfer agreements. However, a great deal of uncertainty exists regarding the future cost and availability of water supplies on the State's water transfer market as demands for limited water supplies continue to rise.
- Based on the identified problems and opportunities, the following objectives were developed for the Los Vaqueros Expansion Investigation (LVE):
 - ✧ *Increase water supply reliability for water providers within the study area, principally to help meet municipal and industrial water demands during drought periods, with a focus on enlarging Los Vaqueros Reservoir.*
 - ✧ *Use an expanded Los Vaqueros Reservoir to develop replacement water supplies for the long-term Environmental Water Account, if the cost of water provided from an expanded reservoir is found to be less than the cost of water for continued implementation of that program.*
 - ✧ *To the extent possible through pursuit of the water supply reliability and environmental water objectives, improve the quality of water deliveries to municipal and industrial customers in the study area.*
- Of numerous water resource management measures identified and evaluated, eight were retained for potential inclusion into concept plans to address the planning objectives.
- Eight concept plans were formulated from the retained management measures to represent a range of potential actions to address the planning objectives. Three concept plans focus on increasing water supply reliability for Bay Area water agencies, two concept plans focus on

providing an EWA replacement supply, and three concept plans combined various measures to address multiple objectives.

- From the eight concept plans, seven plans (in addition to the No-Action plan) were identified for further development as initial alternatives in the remainder of the feasibility study:
 - 1 – Raise Los Vaqueros Dam In-Place for Bay Area Water Supply Reliability** - Raise the existing Los Vaqueros Dam to provide up to 25,000 acre-feet of additional storage and construct an intertie to the South Bay Aqueduct (SBA) at the Dyer Canal Back Surge Pool primarily to improve Bay Area water supply reliability during drought periods.
 - 2 – Enlarge Los Vaqueros Dam and Reservoir for Bay Area Water Supply Reliability** - Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet and construct an intertie to the Dyer Canal primarily to improve Bay Area water supply reliability during drought periods.
 - 4 – Enlarge Los Vaqueros Reservoir with Dyer Canal Intertie for EWA** - Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet in combination with an intertie to the Dyer Canal to provide an EWA replacement supply.
 - 5 – Enlarge Los Vaqueros Reservoir with Bethany Reservoir Intertie for EWA** - Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet in combination with an intertie to Bethany Reservoir primarily to provide an EWA replacement supply.
 - 6 – Water Supply / EWA Combination with Dyer Canal Intertie** - Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet in combination with an intertie to the Dyer Canal to improve Bay Area water supply reliability and provide an EWA replacement supply.
 - 7 – Water Supply / EWA Combination with Bethany Reservoir Intertie** - Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet in combination with an intertie to Bethany Reservoir to improve Bay Area water supply reliability and provide an EWA replacement supply.
 - 8 – Water Supply / EWA Combination with Water Quality Improvements** – Enlarge Los Vaqueros Reservoir by up to 400,000 acre-feet in combination with an intertie to the Dyer Canal and operate the project to improve Bay Area water supply reliability, provide an EWA replacement supply, and improve the quality of delivered water supplies.
- Desalination with new storage, represented by Concept Plan 3, was not identified for further development as a stand-alone alternative. However, it is believed that a desalination facility should be considered similar to other source water diversion and treatment options as a potential increment to detailed alternative plans to be developed in the next phase of study.
- Each of the initial alternatives identified for further development contributes to increasing Bay Area water supply reliability and/or providing an EWA replacement supply, and all of the initial alternatives can contribute, to some degree, to improving delivered water quality.

- It is believed that the initial alternatives recommended for further development in the next phase of the investigation could be formulated in a manner consistent with the CCWD Board of Directors Principles of Participation for a project involving the enlargement of Los Vaqueros Dam and Reservoir.
- It appears that for potential projects either focused on or including development of EWA replacement supplies, conveyance facilities from Los Vaqueros Reservoir directly to Bethany Reservoir could be more cost-effective than from Los Vaqueros to the SBA at Dyer Canal. This is primarily because deliveries to Bethany Reservoir would not be limited by the capacity or demands of the SBA.
- Since a Federal interest exists in participating in the EWA, a Federal interest may exist in enlarging Los Vaqueros Reservoir to accomplish similar goals. The degree and magnitude of the potential Federal interest will need to be confirmed and quantified as part of future phases of the LVE.
- Several significant next steps in the plan formulation process for the LVE include detailed development of complete alternative plans, including the locally preferred plan; completing environmental baseline studies; identifying potential impacts and mitigation features; identifying a tentatively selected plan; defining project ownership and implementation relationships; and completing the Federal Feasibility Report and State and Federal environmental compliance documentation.
- Future technical studies for the LVE will focus on water operations modeling to better define potential benefits to water supply reliability and the EWA, and on defining possible impacts in the CVP and SWP systems. Technical studies also will concentrate on preparing detailed facilities designs, refining cost estimates, and conducting economic analyses, including analysis of the future cost of water transfers and purchases.

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